

## Energy News Overview

In February the Obama administration launched rulemaking for new fuel economy standards for heavy duty trucks and greenhouse gas emission standards for existing power plants. Continuing its policy of working around the gridlocked Congress the administration this month announced new policies to reduce emissions of secondary greenhouse gases such as methane: see article on page 6.

Among the specific actions outlined by the administration to reduce methane emissions:

- This summer the EPA will formally call for updated standards to reduce methane from new landfills.
- Next month, the Department of Interior's Bureau of Land Management will propose developing a program for the capture and sale or disposal of waste mine methane.
- In June, the federal government will launch a "Biogas roadmap" partnership with the dairy industry.
- The administration is also floating new regulation and voluntary action for the oil and gas industry.

Following the Russian takeover of Crimea a number of political pundits have called for the U.S. to utilize its newly available abundance of domestic natural gas and offer European nations an alternative to Russian supplies. The Energy Department recently approved several proposed LNG export facilities, including Jordan Cove in Coos Bay Oregon—the first west coast facility to receive approval. The sites still must receive FERC and local approval before construction can begin. See article on page 6.

In local energy news a significant concrete deformation in the fish ladder section of Grant County PUD's Wanapum dam has necessitated a drawdown of the reservoir behind the dam. The reservoir drawdown has caused power production at Chelan PUD's Rock Island dam to be halted. Grant PUD employees and other experts are evaluating the problem and trying to determine the best solution. See articles on pages 5 and 6 regarding Wanapum dam.

There were initial news reports today that an explosion had occurred at the Plymouth LNG storage facility in eastern Washington. Four people were injured in the blast and residents living within 2 miles of the facility were evacuated. The damage was primarily confined to the LNG storage facility and the interstate pipeline that transports natural gas to other areas of the northwest was still functioning. See article: <http://www.columbian.com/news/2014/mar/31/natural-gas-explosion-reported-in-benton-county/>

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# What's Happening in the Energy Office

## **Commerce resumes its public process to update Energy Independence Act (I-937) rules**

Commerce resumed its review of the rules governing the state's conservation and renewable resource law, the Energy Independence Act or I-937. It adopted a first round of amendments in January and, at the suggestion of stakeholders, suspended the process while the state legislature was meeting.

The Phase 2 work begins with an opportunity for written comments, which are due April 30, 2014. Commerce will convene a stakeholder workshop on May 14, 2014, in Olympia.

In addition to looking at any issues left unresolved at the end of Phase 1, stakeholders are encouraged to comment on whether any rule changes are needed because of two bills enacted by Governor Inslee and the Legislature in 2014. ESHB 2014 increases flexibility for utilities to manage the conservation requirements of the EIA, and EHB 2733 opens the renewable energy standard to hydroelectric generators placed in irrigation canals and municipal water and wastewater pipes.

The Commerce rules apply to municipal utilities, public utility districts, and cooperative utilities with more than 25,000 customers. The state Utilities and Transportation Commission, which oversees EIA compliance by investor-owned utilities, is also engaged in a rule making on this subject. The Phase 2 notice, a list of potential Phase 2 issues, and other rule making documents are available here: [commerce.wa.gov/eia](http://commerce.wa.gov/eia)

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# Electricity, Petroleum & Natural Gas Prices

## Energy Price Overview

Over the past two weeks the spot price for West Texas Intermediate increased several dollars trading at over \$100 per barrel. While it could be due to geopolitical tensions between Russia and the U.S. and E.U. the price for Brent crude oil hardly budged during the same time period. The price differential between WTI and Brent has narrowed which suggests that pipeline constraints in the U.S. have eased resulting in higher prices for WTI. Over the mid-term the Dept. of Energy foresees modest downward pressure on oil prices due to increased North American production and forecasts WTI to average \$93.3 and \$89.6 per barrel in 2014 and 2015 respectively: the average for 2013 was \$97.9. A recent article by the financial paper Barron's is forecasting WTI crude to decline into the \$75-80 range, which would shake up the government finances for several petrol-states including Russia.

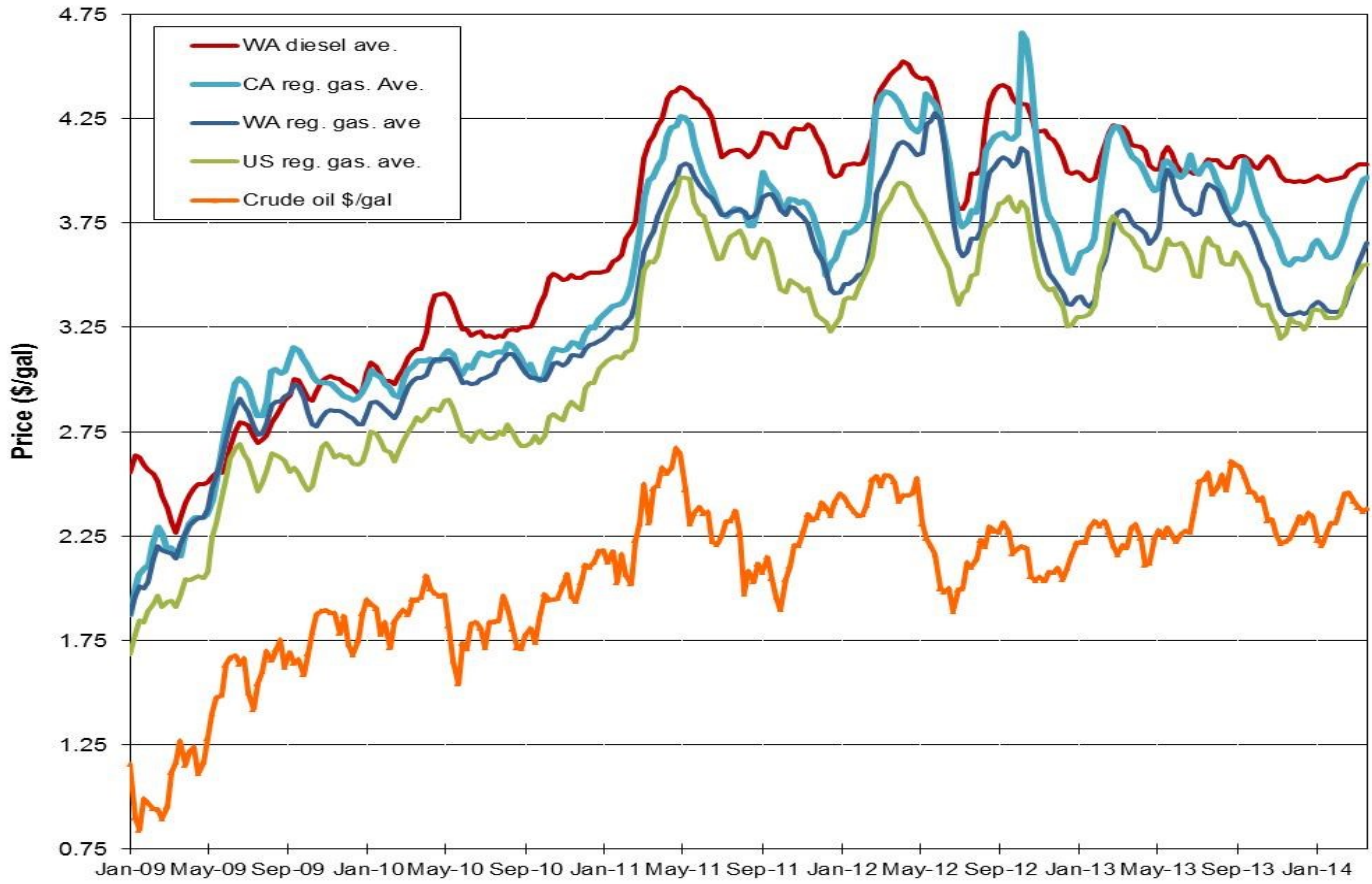
During the last full week in March U.S. gasoline and diesel prices averaged \$3.55 and \$3.99 per gallon, representing an 11 cent increase and 3 cent decrease respectively. For the same period Washington state gasoline and diesel prices averaged \$3.66 and \$4.03 per gallon a 25 cent and 3 cent increase from the last week in February. Gasoline prices typically increase during the spring as demand increases and refiners begin to switch to less volatile summer blends.

The price for month ahead NYMEX natural gas dropped sharply to \$4.37 per MMBtu: an 88 cent decrease from the previous month. The price decrease was expected as cold winter weather in the eastern half of the nation is easing. Locally natural gas spot price at Kingsgate was \$4.33 per MMBtu, down 41 cents from the price reported last month. Natural gas storage dropped by 57 billion cubic feet to 896 Bcf for the week ending March 21. Reflecting the severe winter in much of the U.S., the national gas storage level is 51 percent below its 5-year average, but in the West we are only 41 percent below average. The gas storage refill season typically begins in April and the current deep gas storage deficit, combined with stagnant US production and coal plant retirements, will undoubtedly support higher natural gas prices for the rest of 2014.

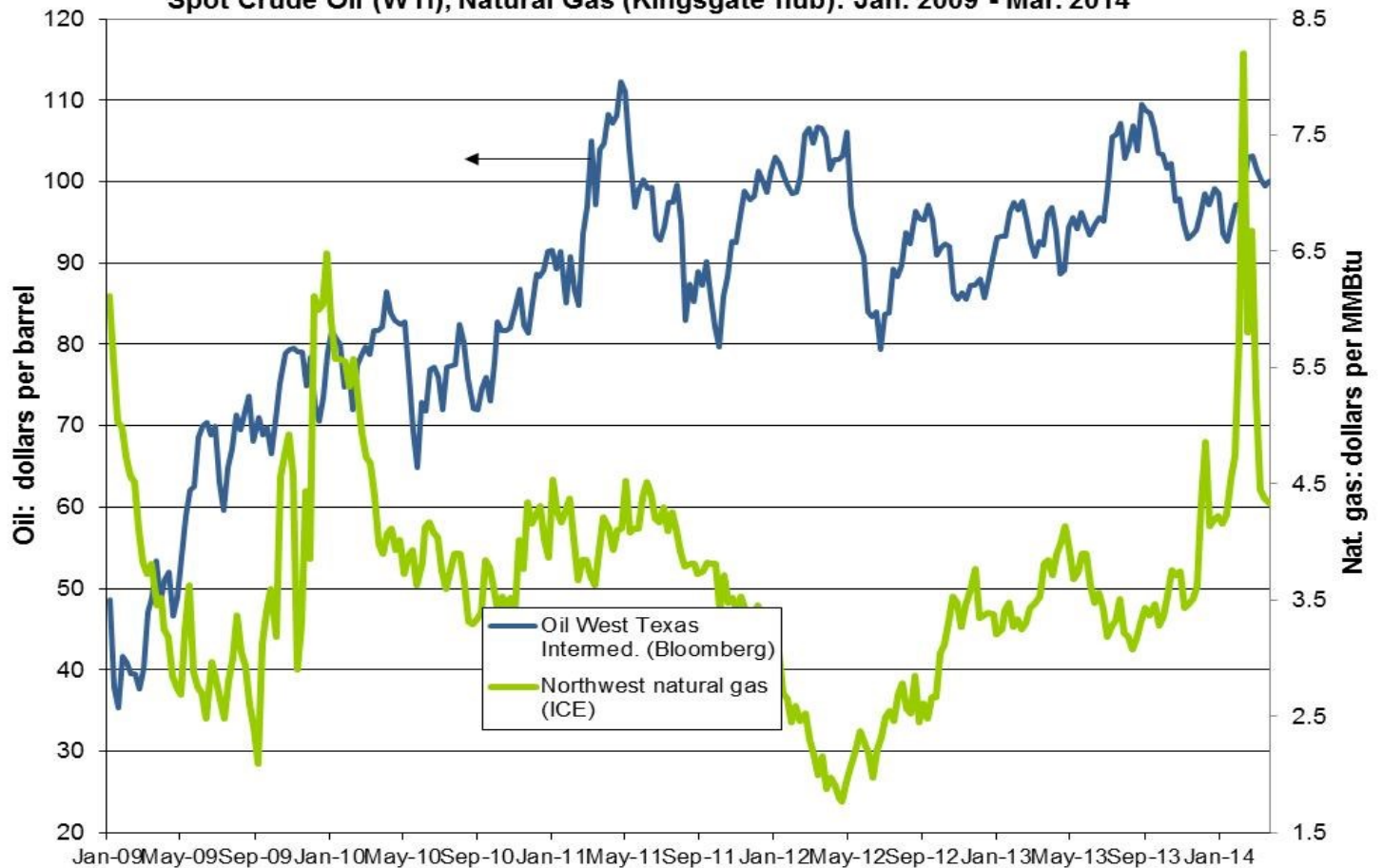
<b>Energy Price Summary</b>	<b>Current</b>	<b>Month Ago</b>	<b>Year Ago</b>
Monthly Range at Mid-C (Peak: \$ per MWh)	NA	45-315	27-40
Average Mid C price (Peak hours \$ MWh)	NA	80.8	37.2
Electricity WA Retail: Jan. (cents/kWh)	7.20	7.29	7.15
Natural gas Kingsgate spot price (next day: \$ per million BTU)	4.33	6.68	3.85
Natural gas Sumas futures price (next month \$ per million BTU)	4.38	5.58	3.53
Natural gas futures (NYMEX next month: \$ per million BTU)	4.37	5.29	4.07
E85 (national average: \$ per gallon gasoline)	4.17	3.73	4.22
Ethanol (CBT next month contract: \$ per gallon)	3.50	2.15	2.58
Corn (CBT next month contract: \$ per bushel)	5.02	4.52	7.33
Petroleum, West Texas Intermediate futures (\$ per barrel)	100.1	103.2	96.1
Seattle gasoline price (\$ per gallon)	3.71	3.45	3.83
Gasoline futures (NYMEX next month: \$ per gallon)	2.87	2.77	3.12
State diesel price (\$ per gallon)	4.03	4.00	4.12
Heating oil futures (NYMEX next month: \$ per gallon)	2.86	3.07	2.92
U.S. residential propane price report (reported Oct.-Mar.)	3.05	3.48	2.50
<b>Clean Cities: Alternative Fuel Price Report, Jan. 2013</b>	<b>US Avg current</b>	<b>West Coast current qtr</b>	<b>West Coast last qtr avg</b>
Ethanol E85 (\$ per gas gallon equiv. )	4.29	4.55	4.61
Biodiesel B20 (\$ per diesel gallon equiv.)	4.05	4.15	4.35
Biodiesel B99-100 (\$ per diesel gallon equiv.)	4.71	4.99	4.84
Compressed Natural Gas (\$ per gas gallon equiv. )	2.09	2.33	2.31
Propane (\$ per gas gallon equiv.)	4.31	4.50	4.22

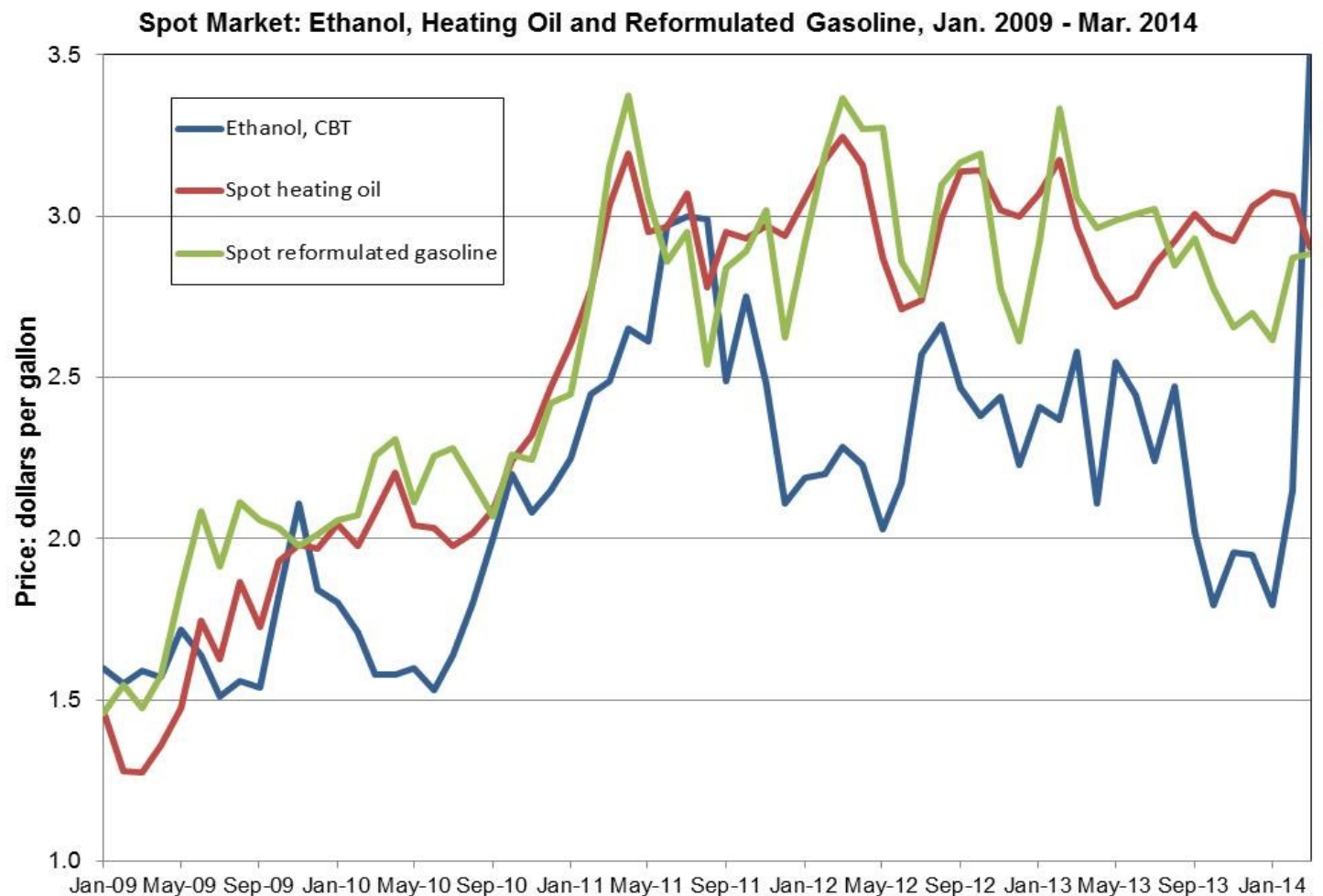


**Retail Gasoline and Diesel Prices: Jan. 2009 - Mar. 2014**



**Spot Crude Oil (WTI), Natural Gas (Kingsgate hub): Jan. 2009 - Mar. 2014**





## Energy Headlines - If you only have time to read a few articles—read these.

Outside Experts weigh in on Columbia River's Damaged Wanapum Dam. Northwest Public Radio.

<http://nwpr.org/post/outside-experts-weigh-columbia-river-s-damaged-wanapum-dam>

Feds approve LNG exports from proposed Jordan Cove Energy Project in Coos Bay. Oregonian.

[http://www.oregonlive.com/business/index.ssf/2014/03/feds\\_approve\\_lng\\_exports\\_from.html](http://www.oregonlive.com/business/index.ssf/2014/03/feds_approve_lng_exports_from.html)

United Nations Says Global Warming Not Stopped, Will Go On for Centuries. Mar. 24, Reuters.

<http://www.reuters.com/article/2014/03/24/us-climatechange-temperature-idUSBREA2N1MG20140324>

Beneath cities, a decaying tangle of gas pipes. New York Times, Mar. 23.

<http://www.nytimes.com/2014/03/24/nyregion/beneath-cities-a-decaying-tangle-of-gas-pipes.html?partner=rss&emc=rss&r=0>

Climate Consultant Refutes Fuel Cost Increase Assumption. Mar. 7, News Tribune.

<http://www.thenewstribune.com/2014/03/07/3083633/climate-consultant-refutes-cost.html>

Four Injured in Natural Gas Pipeline Rupture near Plymouth. Tri-City Herald, March 31.

<http://www.tri-cityherald.com/2014/03/31/2904040/natural-gas-facility-on-fire-near.html>

Are Walmart's Green Claims Simply Greenwashing? Renewable Energy World, March 2013

<http://www.renewableenergyworld.com/rea/news/article/2014/03/are-walmarts-green-claims-simply-greenwashing?cmpid=rss>

## Energy Headlines—continued

### Regional

Energy Northwest Suing Company That Made Parts for Condenser System. Mar 3, Tri-City Herald  
<http://www.tri-cityherald.com/2014/03/03/2857369/energy-northwest-suing-company.html>

Power Production Stopped at Chelan PUD's Rock Island Dam. Seattle Post-Intelligencer  
<http://www.seattlepi.com/business/energy/article/Power-production-stopped-at-Rock-Island-5297277.php>

Seattle: Rising Star among Global Clean-Energy Cities. Mar. 26, Seattle Post-Intelligencer.  
<http://blog.seattlepi.com/energy/2014/03/26/seattle-rising-star-among-global-clean-energy-cities/>

### Energy Security

Transformers Could Be Weak Link in U-S Power Grid. United Press International.  
[http://www.upi.com/Top\\_News/US/2014/03/04/Transformers-could-be-weak-link-in-US-power-grid/UPI-99471393968723/](http://www.upi.com/Top_News/US/2014/03/04/Transformers-could-be-weak-link-in-US-power-grid/UPI-99471393968723/)

Bill Would Give Feds New Power to Protect Electric Grid. The Hill, Washington.  
<http://thehill.com/blogs/e2-wire/e2-wire/201834-bill-would-give-feds-new-power-to-protect-electric-grid>

### Renewables & Energy Efficiency

Solar Panel Maker Is First to Default in China's Domestic Bond Market. Mar. 7, New York Times.  
<http://dealbook.nytimes.com/2014/03/07/solar-panel-maker-is-first-to-default-in-chinas-domestic-bond-market/?partner=rss&emc=rss>

Energy Efficiency Ain't Got No Respect. March 2014, Renewable Energy World.  
<http://www.renewableenergyworld.com/rea/news/article/2014/03/energy-efficiency-aint-got-no-respect?cmpid=rss>

Utility Efficiency Programs Saving Enough to Power More than 12 Million Homes. Fierce Energy  
<http://www.fierceenergy.com/story/utility-efficiency-programs-saving-enough-power-more-12m-homes/2014-03-26>

Car companies take expertise in battery power beyond the garage. Mar. 25, New York Times  
<http://www.nytimes.com/2014/03/25/business/car-companies-take-expertise-in-battery-power-beyond-the-garage.html>

German energy push runs into problems. Mar. 19, New York Times  
<http://www.nytimes.com/2014/03/20/business/energy-environment/german-energy-push-runs-into-problems.html>

LED Bulb Efficiency Expected to Continue Improving as Cost Declines. The Energy Collective.  
<http://theenergycollective.com/todayinenergy/356546/led-bulb-efficiency-expected-continue-improving-cost-declines>

### Climate Change

Washington State Gov. Jay Inslee on Climate Solutions in the Pacific Northwest. Grist Online.  
<http://grist.org/article/gov-jay-inslee-on-climate-solutions-in-the-pacific-northwest/>

EPA Chief Says New U-S Energy Rules Won't Hobble Business. Mar. 6, Reuters.  
<http://www.reuters.com/article/2014/03/06/us-ceraweb-mccarthy-idUSBREA2528V20140306>

Australian Senate votes against repeal of carbon tax. The Australian, March 20.  
<http://www.theaustralian.com.au/national-affairs/senate-votes-against-abolition-of-carbon-tax/story-fn59niix-1226860065470>

White House unveils plans to cut methane emissions. USA Today, March 28.  
<http://www.usatoday.com/story/news/nation/2014/03/28/obama-methane-emissions-plan/7006061/>

Exxon Mobil agrees to report on climate change's effect on business model. The Guardian, Mar. 20.  
<http://www.theguardian.com/business/2014/mar/20/exxon-mobil-climate-change-report-business-model>

Panel's warning on climate risk: Worst is yet to come. New York Times, March 31.  
[http://www.nytimes.com/2014/04/01/science/earth/climate.html?hp&\\_r=0](http://www.nytimes.com/2014/04/01/science/earth/climate.html?hp&_r=0)

### Natural gas

U.S. hopes boom in natural gas can curb Putin. New York Times, Mar. 5.  
<http://www.nytimes.com/2014/03/06/world/europe/us-seeks-to-reduce-ukraines-reliance-on-russia-for-natural-gas.html>

## Recent Reports on Energy and Climate Change

Tesoro Savage Petroleum Terminal submission to the Energy Facility Siting Evaluation Council

<http://www.efsec.wa.gov/Tesoro-Savage.shtml>

<http://www.iea.org/publications/freepublications/publication/name,43771,en.html>

Fifth Assessment Report. Intergovernmental Panel on Climate Change (IPCC) 2013-14.

<http://www.ipcc.ch/>

First academic study released in EDF's groundbreaking methane emissions series. Environmental Defense Fund, Sept 2013.

<http://www.edf.org/media/first-academic-study-released-edf%E2%80%99s-groundbreaking-methane-emissions-series>

World Bank: 4 Degrees - Turn Down the Heat. Potsdam Institute for Climate Impact Research and Climate Analytics. June 2013. [http://www-wds.worldbank.org/external/default/WDSPContentServer/WDSP/IB/2013/06/14/000445729\\_20130614145941/Rendered/PDF/784240WP0FullI00D0CONF0to0June19090L.pdf](http://www-wds.worldbank.org/external/default/WDSPContentServer/WDSP/IB/2013/06/14/000445729_20130614145941/Rendered/PDF/784240WP0FullI00D0CONF0to0June19090L.pdf)

[http://www-wds.worldbank.org/external/default/WDSPContentServer/WDSP/IB/2013/06/14/000445729\\_20130614145941/Rendered/PDF/784240WP0FullI00D0CONF0to0June19090L.pdf](http://www-wds.worldbank.org/external/default/WDSPContentServer/WDSP/IB/2013/06/14/000445729_20130614145941/Rendered/PDF/784240WP0FullI00D0CONF0to0June19090L.pdf)

Long-term outlook for nuclear power depends on lifetime of plant, EIA, Apr. 2013

<http://www.eia.gov/todayinenergy/detail.cfm?id=10991>

Environmental Protection Agency 2012 Climate Change Indicators Report.

<http://www.epa.gov/climatechange/science/indicators/>

Report on the First Quadrennial Technology Review, US Dept. of Energy

<http://energy.gov/downloads/report-first-quadrennial-technology-review>

Understanding Household Preferences for Alternative- Fuel Vehicle Technologies. Mineta Transportation Institute. <http://www.transweb.sjsu.edu/project/2809.html>

[www.transweb.sjsu.edu/project/2809.html](http://www.transweb.sjsu.edu/project/2809.html)

Redrawing the Energy-Climate Map. International Energy Agency, June 2013.

[http://www.iea.org/media/freepublications/executivesummary/WE02013\\_Climate\\_Excerpt\\_ES\\_WEB.pdf](http://www.iea.org/media/freepublications/executivesummary/WE02013_Climate_Excerpt_ES_WEB.pdf)

Natural Gas Weekly Update: <http://www.eia.gov/naturalgas/weekly/?src=Natural-b1>

Monthly Energy Review, EIA : <http://www.eia.gov/totalenergy/data/monthly/>

Short-term Energy Outlook, EIA : <http://www.eia.gov/forecasts/steo/>

This Week in Petroleum. EIA,: <http://www.eia.gov/oog/info/twip/twip.asp>

## River & Snow Pack Info

- Observed Feb stream flow at The Dalles: 91% of average.
- Observed Feb. precipitation above The Dalles: 73% of average.
- Forecast runoff at The Dalles: 80 million acre-feet, 79% of 30-year average
- Forecast snowpack volume: 85% of average.
- Federal hydropower generation in Dec. : 7,428 aMW, 2009-2013 average: 9,269 aMW.
- Reservoir content (Libby, Hungry Horse, Grand Coulee, Dworshak): Dec 76%, 5-year average: 75%.

## Power Exchanged

Average flow of power during the last 30 days

- California (exported to) 4731 MW
- Canada (export to) 955 MW
- Net power exported: 5686 MW



# History: Elwha River Hydroelectric Project

[http://www.historylink.org/index.cfm?DisplayPage=output.cfm&file\\_id=7590](http://www.historylink.org/index.cfm?DisplayPage=output.cfm&file_id=7590)

February 12, 1914 saw a celebration in Port Angeles for the beginning of electric power service from the Elwha River Dam. The dam was decommissioned and removed between September 2011 and March 2012. Work is underway on an ecosystem restoration project. Upstream is the Glines Canyon Dam, also being removed. (Photo by Larry Ward, Lower Elwha Fisheries Office (2005).



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